98-559100/48 D21 E19 HENK 97.04.24
HENKEL KGAA *EP 873745-A2
97.04.24 97DE-1017222 *(98.10.28)* A61K 7/13

**Hair dye compositions containing keto- and/or aldehyde compound as colour forming component - together with compound with primary or secondary amino groups or hydroxy groups and colour strengthening agent (Ger)**

**C98-167433** R(AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI)
Addnl. Data: MOELLER H, HOEFFKES H, MEINIGKE B
98.04.15 98EP-106833

D(8-B6) E(6-A2E, 7-D, 10-A6A, 10-B1, 10-B2, 10-B3, 10-B4, 10-D1, 10-F2, 26-C)

A hair dye composition(s) for dyeing keratinic fibres, especially human hair, contains:
(A) one or more keto- and/or aldehyde compounds which colour keratinic fibres either alone or in the presence of a compound of type (B);
(B) at least one compound with primary or secondary amino groups or hydroxy groups selected from primary and secondary aliphatic or aromatic amines, N-containing heterocyclic compounds, aminoacids, oligopeptides made up of 2-9 aminoacids and aromatic hydroxy compounds, and/or at least one CH-active compound; and
(C) a colour strengthening agent (booster) selected from piperidine, pyridine, imidazole, pyrrolidine, pyrrolidone, pyrazole, triazole, piperazidine, derivatives of these and their salts:
provided that (B) and (C) are different.

USE

The composition is useful for dyeing keratinic fibres in the form of hair, wool and pelts, especially human hair.

ADVANTAGE

The compositions are virtually a non-irritant to the skin. A wide range of colour shades can be formulated. The colours produced are at least as good as those formed by conventional oxidation dye formulations with respect to colour depth, fastness and covering power over grey without it being absolutely necessary to include oxidising agents such as $H_2O_2$ into the dye mix.

SPECIFIC COMPOUNDS

Approximately 185 specific primary and secondary amine



compounds, N-containing heterocyclic compounds, aromatic OH compounds and CH-active compounds suitable as component (B) are claimed, e.g:
N-(2-hydroxyethyl)-N-ethyl-phenylenediamine;
4-aminophenol;
p-phenylenediamine;
2,5-diaminotoluene;
3,4-methylene-dioxyaniline;
2,6-dihydroxy-3,4-dimethylpyridine;
5,6-dihydroxyindole; and
barbituric acid, and their salts.

17 Specific compounds suitable for use as component (C) are claimed, e.g:
piperidine;
piperidine-2-carboxylic acid;
piperidine-3-carboxylic acid;
piperidine-4-carboxylic acid;
pyridine;
2-hydroxypyridine;
3-hydroxypyridine;
histidine;
pyrrolidine;
pyrrolidone; and
pyrazole, and their salts.

PREFERRED COMPOSITION

Component (A) is selected from e.g. aromatic and heteroaromatic aldehydes and ketones, 1,3-carbonyl compounds, 1,2-diketones, isatin and derivatives, ninhydrin and derivatives, alloxan, isobarbituric acid, aminoacrolein derivatives and p- and o-quinone derivatives. The dye composition contains 0.03-65 (1-40) mMol each of (A) and (B) per 100 g composition. Anionic, zwitterionic and/or nonionic surface active agents may also be incorporated. The dye composition when ready for use may contain 0.01-6 wt. % of an oxidising agent such as $H_2O_2$.

EXAMPLE

10 mMol glutaconic aldehyde, 10 mMol N,N-bis-(2-hydroxyethyl)-p-phenylenediamine HCl, 10 mMol piperidine (booster), 10 mMol Na acetate and 1 drop 20 % fatty alkyl ether sulphate solution were mixed in 100 ml water, the slurry heated to 80 °C for a short time, cooled and filtered. The pH was adjusted to 6, then strands of 90 % grey hair were dyed in the dye solution for 30





minutes at 30 °C, rinsed and dried. The hair was dyed in a blue-black shade with very strong colour intensity. (LME)
(14pp0513DwgNo.0/0)



(C) 2003 Copyright Derwent Information Ltd.